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ABSTRACT

The methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming are described. Eighteen speech therapists completed the Bankson Language Screening Test (BLST) for all kindergarten children in one school district (N-2,110). Results showed that, when the 20th percentile criterion was used, 40 percent of all kindergarteners failed the BLST. In order to minimize erroneous classifications, children with limited English proficiency were re-directed to their respective language arts programs. The speech therapists consulted with the classroom teacher on the remaining children to determine the necessity of initiating a formal request for speech-language evaluation services. A multi-disciplinary assessment could also be conducted if it was suspected that the child's difficulties encompassed more than speech-language functioning. Additional assistance for children falling in the borderline range was provided by the language arts resource teachers. Results are discussed in terms of the interrelationships among educational objectives, performance criteria, task centered assessment, and instructional strategies. (Author/PN)

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A DISTRICT SCREENING PROGRAM FOR IDENTIFYING SPEECH-LANGUAGE PROBLEMS

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TM 830 186

This paper describes the methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming. Eighteen speech therapists completed the Bankson Language Screening Test (BLST) for all kindergarten children in one school district (N=2110). Results showed that 40 percent of all kindergarteners failed the BLST using the 20th percentile criterion. In order to minimize erroneous classifications, children with limited English proficiency were re-directed to their respective language arts programs. The speech therapists consulted with the classroom teacher on the remaining children to determine the necessity of initiating a formal request for speech-language evaluation services. A multi-disciplinary assessment could also be conducted if it was suspected that the child's difficulties encompassed more than speech-language functioning. Additional assistance for children falling in the borderline range was provided by the language arts resource teachers. Results are discussed in terms of the interrelationships among educational objectives, performance criteria, task centered assessment and instructional strategies.

There is an increasing body of literature which stresses the need to check the linguistic performance of preschool and kindergarten children (e.g. Bangs, 1978; Wiig and Semel, 1976; Zeitlin, 1976). It is language ability that is critical in learning to read and permits communication and interaction for further cognitive development. Many children are passing on to higher grade levels and are facing academic difficulties because of language problems that should have been identified and remediated at an earlier age. This paper describes the methodology and results of a kindergarten screening program which was designed to identify speech and language problems and provide intervention strategies through special and/or regular education programming.

METHODS

Selection of Screening Instrument

The instrument selected for the screening program was the Bankson Language Screening Test (BLST). The BLST is an individually administered battery consisting of 17 nine item sub-tests. The general areas assessed include semantic knowledge, morphological rules, syntactic rules and visual and auditory perception. The normative sample was comprised of 637 students ages four through eight years, 80 percent of whom were Caucasians from middle class families. Test-retest reliability was reported at .94 and concurrent validities ranged from .54 with the Peabody Picture Vocabulary Test to .64 with the Test of Auditory Comprehension of Language. The test manual stipulates that children who scored at the 30th percentile and below require further language assessment.

The BLST was selected based upon its perceived usefulness in programming for instructional objectives, its short administrative time and its fairly low costs.

Procedures

The State Department of Education's (DOE) speech-language therapists (SLT) discussed the proposed screening program with all of the elementary school principals in the Leeward District of Oahu. All schools agreed to participate in the screening and notification was sent to parents about the program. Approximately 18 SLTs, with assistance from communication aides and volunteer teachers and parents completed the BLST screening for all kindergarten children in the district in December of 1981 (N=2,110).

Based upon previous knowledge of the nature of the population to be serviced the SLTs concurred that a cutoff at the 20th percentile was to be used instead of the recommended 30th percentile. This was based on the fact that the Leeward District population includes many recently immigrated families from the Philippines, Samoa and Indochina. In order to minimize erroneous classifications, all children who failed the screening were not automatically referred for a comprehensive speech-language evaluation. Students with limited English proficiency were re-directed to their respective language arts programs. The SLTs consulted with the classroom teacher on the remaining children who failed in order to ascertain the necessity of initiating a formal request for speech-language evaluation services. Because the BLST was primarily designed to assess expressive language, the teachers' input was essential in helping the SLTs determine the appropriateness of a formal referral. All formal referrals were processed with the consent of parents. The SLT also had the flexibility to suggest a multi-disciplinary assessment if it was suspected that the child's

difficulties encompassed more than speech-language functioning. Attachment I presents an overview of the entire screening procedure.

Additional assistance for children falling between the 20th and 50th percentile was provided by the language arts resource teachers (LART). The LARTs developed a series of demonstration lessons which were presented to all kindergarten teachers in an effort to link instructional strategies to specific linguistic weaknesses.

RESULTS AND DISCUSSION

Overall results for the district are presented in Table 1. These results show that approximately 40 percent of all kindergarteners failed the BLST using the 20th percentile criterion. In January and February of 1982 the SLTs met with all kindergarten teachers to discuss the findings. An individual language profile was developed for each child and a composite class language profile was provided to each teacher (refer to Attachments II and III). Between March and June of 1982 the kindergarten teachers initiated referrals on those children who failed the screening and were designated in need of a more comprehensive speech-language evaluation. The data in Table 2 indicates that approximately eight percent of all children who failed the screening were referred for a follow up speech-language evaluation. Forty-two percent of those referred were certified as Speech Impaired and therefore eligible to receive speech and language services on an itinerant basis. Furthermore, out of the total sample who failed the screening only three percent of the children were referred for a multi-disciplinary assessment. Forty-eight percent of these children were made eligible for handicapping conditions other than Speech Impaired. Table 3 summarizes the follow up results for children referred for a multi-disciplinary assessment.

TABLE 1

District Screening Results

COMPLEX	NUMBER TESTED	NUMBER 20% and BELOW	FAILURE %
Waianae	342	144	42%
Nanakuli	353	167	47%
Campbell	311	95	30%
Waipahu	416	199	48%
Lower Pearl City	351	171	49%
Upper Pearl City	337	38	11%
DISTRICT	2110	817	39%

TABLE 2

Screening Follow Up Results: Speech-Language Evaluation

COMPLEX	Number Referred for Speech-Language Evaluation	Number Certified As Speech Impaired	Percentage of Students Identified
Waianae	13	5	38%
Nanakuli	18	5	28%
Campbell	1	1	100%
Waipahu	11	3	27%
Lower Pearl City	15	9	60%
Upper Pearl City	9	5	56%
DISTRICT	67	28	42%

TABLE 3

Screening Follow Up Results: Multi-Disciplinary Evaluation

COMPLEX	Number Referred for Multi-Disciplinary Evaluation	Number Certified for Special Education	Percentage of Students Identified
Waianae	1	1	100%
Nanakuli	4	2	50%
Campbell	1	1	100%
Waipahu	16	6	38%
Lower Pearl City	0	0	
Upper Pearl City	3	2	67%
DISTRICT	25	12*	48%

*11 eligible for learning disability
1 eligible for mild mental retardation

BLST Item Analysis

An item analysis was conducted on the BLST to eliminate non-discriminative items. The item analysis based upon a stratified random sample of 200 children, with each elementary school in the district represented. Fifty-three items were deleted using the criteria of difficulty level and point biserial correlations (refer to Attachment IV).

Problems and Limitations

It is difficult to assess the cost effectiveness of the BLST relative to man hours expended because of several intervening factors. First, the criteria for Speech Impaired eligibility underwent a change during the course of the screening project when the State mandated the use of a new battery to assess speech-language functioning. Thus it was not possible to compare BLST identification rates with that of previous years. Another problem was that referrals were left to the discretion of individual teachers and some teachers failed to follow up. This was compounded by the re-assignment of diagnostic teams so that the SLTs were unable to follow up on individual children at their respective schools.

Implications

The DOE in Hawaii has implemented a state plan entitled the Foundation Program which outlines educational objectives and performance criteria at each grade level. The first Foundation Program Objective is to develop basic skills for learning and effective communication with others. At the kindergarten level some of the performance expectancies include sharing of information and experiences, responding to oral instructions and requests and responding to meanings conveyed by differences in sounds, vocabulary and grammar (refer to Attachment V). The present screening program illustrates the inter-relationships between educational objectives, performance criteria, task centered assessment and instructional strategies. It also

demonstrates the need to establish linkages between school level and support services personnel as well as between the special and regular education curriculums.

In a recent Journal of Learning Disabilities article, Lindsay and Wedell (1982) question the predictive usefulness of screening instruments and recommend a model involving "classroom based screening followed by the setting of appropriate objectives for children identified as having problems at that time" (p. 216). The present screening program exemplifies the pragmatics of such a model in that the teacher can respond more immediately to a child's specific deficits.

The screening project was originally slated for a trial period of three years. However the project was terminated effective June of 1982 because the Hawaii State Legislature appropriated $1.5 million dollars to implement a comprehensive screening program for all kindergarteners effective Fall 1982. Entitled Early Provision for School Success, this project will assess all facets of the child's developmental progress, not solely speech-language functioning. Although limited in scope, the present project was a useful screening model because it demonstrated the cooperation and coordination necessary for successful implementation and how current evidence of a child's functioning can be used to restructure educational objectives and develop appropriate remediation strategies.

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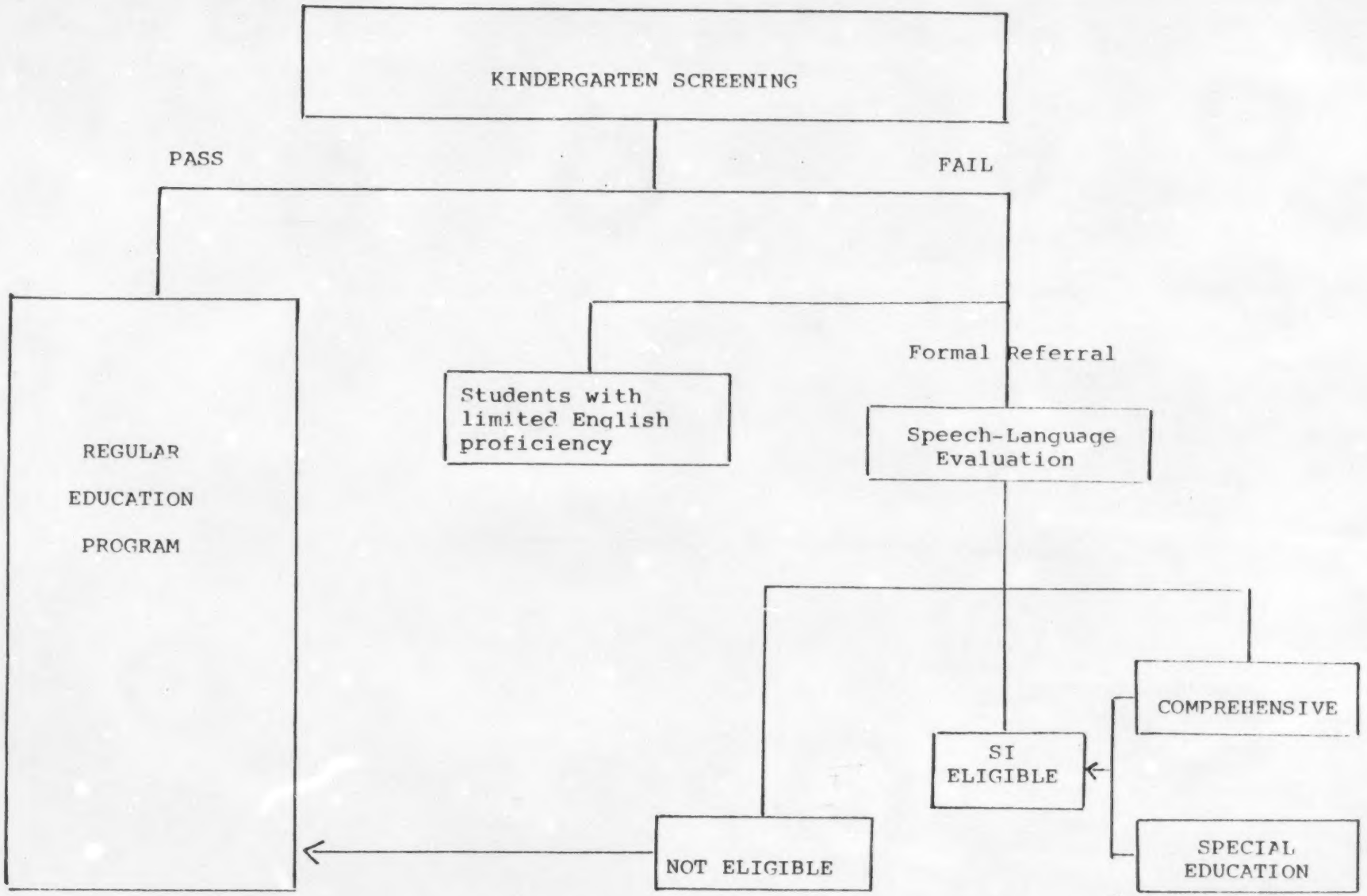
ATTACHMENT I



BANKSON
LANGUAGE PROFILE SHEET

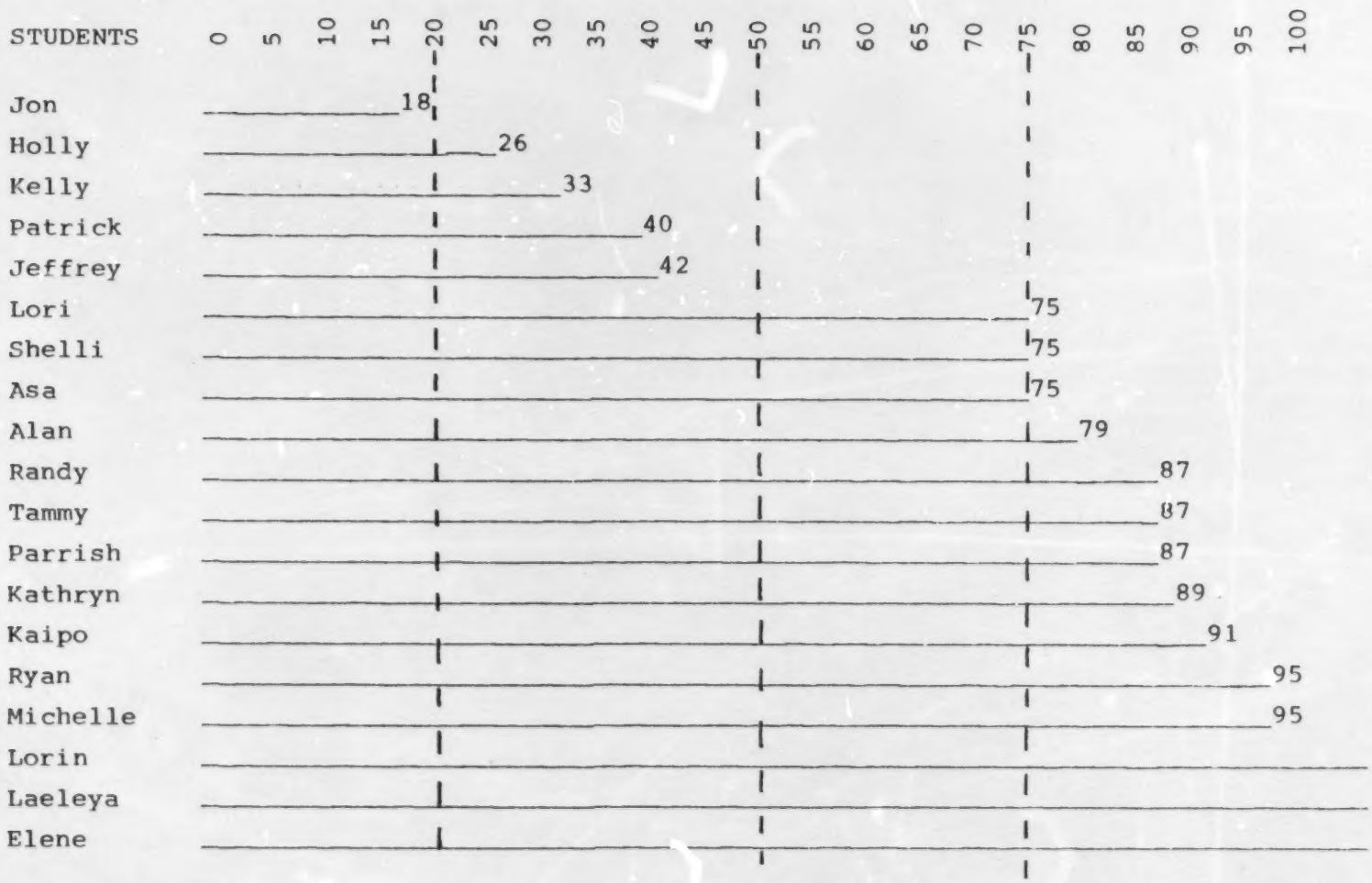
Subtests	Number of Correct Responses 1	2	3	4	5	6	7	8	9
Semantic Knowledge									
A Body Parts									
B Nouns					X				
C Verbs									
D Categories			X						
E Functions						X			
F Prepositions				X					
G Colors/ Quantity						X			
H Opposites									
Morphological Rules									
I Pronouns 0									
J Verb Tenses			X						
K Plurals/ Comparatives/ Superlatives 0									
Syntactic Rules									
L Subject-Verb Agreement/ Negation			X						
M Sentence Repetition/ Judgement			X						
Visual Perception									
N Visual Matching/ Discrimination								X	
O Visual Association/ Sequencing									X
Auditory Perception									
P Auditory Memory					X				
Q Auditory Sequencing/ Discrimination								X	

X = child's score
▬ = average score for children of that age

ATTACHMENT III

CLASS LANGUAGE PROFILE

PERCENTILE RANK



Bankson Language Screening Test
Score Sheet

Part One: SEMANTIC KNOWLEDGE

A. *Body Parts* (Plate 1 — Items 1-9)

		E	(R)			E	(R)			E	(R)
*1	mouth	96%	(____)	4.	chin	82%	(____)	7.	elbow	75%	(____)
*2	eye	100%	(____)	5.	thumb	84%	(____)	8.	ankle	25%	(____)
*3	hand	93%	(____)	6.	knee	75%	(____)	9.	shoulder	72%	(____)

B. *Nouns* (Plate 2 — Items 10-18)

		E	(R)			E	(R)			E	(R)
*10.	butterfly	98%	(____)	13.	lock	64%	(____)	16.	doorknob	35%	(____)
11.	mask	81%	(____)	14.	faucet	39%	(____)	17.	sofa	53%	(____)
*12.	umbrella	91%	(____)	15.	violin	41%	(____)	18.	tent	71%	(____)

C. *Verbs* (Plate 3 — Items 19-27)

		E	(R)			E	(R)			E	(R)
*19.	running	96%	(____)	22.	swinging	88%	(____)	25.	creeping (crawling)	75%	(____)
*20.	reading	96%	(____)	*23.	writing (drawing) (coloring)	94%	(____)	26.	driving	88%	(____)
21.	catching	69%	(____)	*24.	jumping	91%	(____)	27.	hammering (pounding) (making something) (fixing)	85%	(____)

D. *Categories* (Plate 4 — Items 28-36)

		E	(R)			E	(R)			E	(R)
28.	animals	86%	(____)	31.	hot things	64%	(____)	34.	tools	48%	(____)
		82%	(____)			54%	(____)	* 35.	appliances	4%	(____)
29.	toys		(____)	32.	furniture		(____)				(____)
30.	food for breakfast	84%	(____)	33.	fruits	67%	(____)	* 36.	means of transportation	11%	(____)
											(____)

E. *Functions* (Plate 5 — Items 37-45)

		E	(R)			E	(R)			E	(R)
37	eat with	64%	(____)	40.	dig with	70%	(____)	43.	tell time with	67%	(____)
*38	wear	90%	(____)	41	sew with	55%	(____)	44.	fix with	61%	(____)
39	write with	88%	(____)	42.	ride in	72%	(____)	45.	make music with	50%	(____)

* items indicate very easy or very difficult items based upon total percentage of students passing

F. Prepositions (Plate 6 — Items 46–54)

		E	(R)			E	(R)			E	(R)
46.	on	82%	(____)	49.	under (in front of)	64%	(____)	52.	around	55%	(____)
47.	between	42%	(____)	50.	behind (in back of)	28%	(____)	53.	across (through)	26%	(____)
48.	under	62%	(____)	51.	over (above)	31%	(____)	54.	beside (on the side of)	43%	(____)

G. Colors/Quantity (Plate 7)

Colors (Items 55-60)

Quantity (Items 61-63)

		E	(R)			E	(R)			E	(R)
*55.	red	80%	(____)	*58.	green	92%	(____)	61.	more	47%	(____)
*56.	blue	94%	(____)	59.	purple	87%	(____)	62.	most	26%	(____)
*57.	yellow	94%	(____)	*60.	orange	92%	(____)	63.	15	49%	(____)

H. Opposites (No plate utilized — Items 64-72)

		E	(R)			E	(R)			E	(R)
64.	big	68%	(____)	67.	fat	62%	(____)	70.	near	32%	(____)
65.	tall	25%	(____)	68.	first	37%	(____)	71.	heavy	31%	(____)
66.	fast	62%	(____)	69.	easy	37%	(____)	*72.	least	6	(____)

Part Two: MORPHOLOGICAL RULES

I. Pronouns (Plate 8 — Items 73–81)

73. This ball belongs to 80% (her).
74. This ball belongs to 46% (them; both of them).
75. And this ball belongs to 82% (him).

76. In this picture, 41% (she) is holding the ball.
77. In this picture, 22% (they) are holding the ball.
78. In this picture, 48% (he) is holding the ball.

79. This ball is 74% (hers).
*80. This ball is 10% (theirs).
81. This ball is 64% (his).

J. Verb Tenses (Plate 9 — Items 82-84)

82. He likes to run. In this picture he 62% (is running).
83. She likes to read. In this picture she 55% (is reading).
84. He likes to swim. In this picture he 51% (is swimming).

(Plate 9 — Items 85–87)

85. In this picture he 63% (runs)
86. In this picture she 52% (reads).
87. In this picture he 53% (swims).

(Plate 10 — Items 88–89)

88. In this picture he is sm...ng, but in this picture he has already 48% (smiled).
89. In this picture the girl is climbing, but in this picture she has already 44% (climbed) (picked the flowers).

(Plate 11 — Item 90)

90. What will happen to the pan? It 48% (will fall).

K. *Plurals/Comparatives/Superlatives* (Plates 12, 13, 14, and 15 — Items 91-99)

91. Here is a book. Here are two 82% (books).
92. Here is a penny. Here are two 83% (pennies).
* 93. Here is a box. Here are two 18% (boxes).

* 94. Here is a child. Here are two 7% (children).
* 95. Here is a man. Here are two 14% (men).

96-97. This dog is not big. This dog is big. This dog is even 45% (bigger), and this dog is the 62% (biggest).

* 98-99. This cake is not good. This cake is good. This cake is even 8% (better), and this cake is the very 5% (best).

Part Three: SYNTACTIC RULES

L. *Subject-Verb Agreement/Negation* (Plates 16 and 17 — Items 100-108)

100. The cow is eating. The cows 28% (are eating).
101. The ducks are swimming. The duck 52% (is swimming)
102. They walk. She 32% (walks).
103. He walks. They 60% (walk).
104. This man is wearing a hat, but this man 52% (isn't).
105. This dog has a collar, but this dog 32% (doesn't).
106. This cake was eaten, but this cake 47% (wasn't).
107. This tree doesn't have a large trunk, but this tree 36% (does).
*108. Show me who is not a boy 91%.

M. *Sentence Repetition/Judgment of Correctness* (No plate)

Repetition (Items 109-113)

		Correct	Incorrect
109.	The dog likes children.	64%	
110.	Mother told sister to watch the baby.	54%	
111.	Will you show your kitty to me?	59%	
112.	We have to walk because that's Billy's bike.	53%	
113.	I'll give it to you if you want it.	68%	

Judgment of Correctness (Items 114-117)

		Correct	Incorrect
114.	Me fix it.	44%	
115.	The dog running.	47%	
116.	The dish is not broken.	49%	
117.	He walk home.	41%	

Part Four: VISUAL PERCEPTION

N. *Visual Matching/Discrimination*

Matching (Plate 18 — Items 118-121)

		Correct	Incorrect
*118		86%	
119		74%	
120		51%	
121		60%	

Discrimination (Plates 19 and 20 — Items 122-126)

	Correct	Incorrect
122.	78%	
123.	56%	
124	66%	
125.	54%	
126.	47%	

O. *Visual Association/Sequencing*

Association (Plates 21 and 22 — Items 127-131)

	Correct	Incorrect
127.	79%	
*128.	96%	
129	42%	
130.	70%	
*131.	90%	

Sequencing (Plates 23, 24, and 25 — Items 132-135)

	Correct	Incorrect
132.	58%	
133.	46%	
134.	62%	
135.	40%	

Part Five: AUDITORY PERCEPTION

P. *Auditory Memory* (No plate — Items 136-141)

	Correct	Incorrect
136. car goat dance	81%	
137. table run orange big	61%	
*138. feet time hit short dig	14%	
139. Mary is in the car.	86%	
140. I went outside to play football.	81%	
141. Mama asked Sally to bring the brown dog in the house.	37%	

(Items 142-144)

	Correct	Incorrect
142. Stand up and put your hands on top of your head.	80%	
143. Sit down, open the book, and put it on your lap.	80%	
144. Give the book to me, walk to the door, and come back to me.	72%	

Q. *Auditory Sequencing/Discrimination*

Sequencing (No plate — Items 145-147)

145.	69%
146.	68%
147.	62%

Discrimination: (Plates 26 and 27 — Items 148-153)

	Correct	Incorrect
* 148. key	94%	
149. soup	83%	
* 150. rock	94%	

	Correct	Incorrect
151. The coat is by the fence.	63%	
152. Don't be afraid of a big mouth.	46%	
153. Did you get the wash?	86%	

FOUNDATION PROGRAM

Objective I: Develop Basic Skills for Learning and Effective Communication with Others

Performance Expectations for Grade K:

A. Oral Language
   1. Responds to meanings conveyed by pictures
   2. Responds to oral instructions and requests
   3. Responds to others' sharing of experiences and information
   4. Responds to meanings conveyed by differences in sounds, vocabulary and grammar
   5. Shares own experiences
   6. Gives oral direction
   7. Shares information

B. Reading
   1. Follows the text as a story is read orally
   2. Reads a sentence and matches it with the picture which represents its meaning

C. Written Language
   1. Dictates a sentence
   2. Dictates and reads the sentence
   3. Writes and reads a sentence

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